SAMSUNG

Model:SCW-230
(CD-R/RW DRIVE)

CD-ROM service MANUAL

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v The design and part of this product is subject to change without prior notice for its performance improvement.

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■ Specifications

1. General Specifications

- Drive Type : Computer Built-in
- Power Consumption : DC +5V, 0.75A
  DC +12V, 0.15A
- Dimensions : 149mm(W) x 41.5mm(H) x 210mm(D)
- Weight : 1Kg

2. Electrical Features

- Interface : ATAPI BUS(IDE)
- Data Transfer Rate : READ : 900KByte/s
  WRITE : 300KByte/s
- Access Time : 1/3 stroke : 400msec or less (MAX)
  full stroke : 600msec or less (MAX)
- Buffer Capacity : 1MByte
- Error Ratio : Mode 1 : Below 10^{-12}
  Mode 2 : Below 10^{-9}
- Frequency Response : 20Hz ~ 20KHz
- Signal to Noise Ratio : 75dB or more (1KHz, Lineout)
- Distortion Factor : 0.15% or less (1KHz)
- Channel Separation : 65dB or more (1KHz, Lineout)
- Signal Output Level : LINEOUT : 0.7 Vrms(±20%)
  H/PHONE : 0.6 Vrms(±20%)
- Laser Used : Semiconductor Laser

■ Cautions at Service

1. General Items

1) Be careful not to have your eyes or a part of body touch with laser diode when servicing because this product uses laser diode.
2) Do not disassemble Pick-up when servicing. If the laser diode is damaged, replace the entire Mechanism.
3) Keep away from TV or other electrical appliances in order not to get influenced by them during servicing.
4) Be sure to unplug power cable before you start servicing or replace parts.
5) When you insert a disc into disc drive, be sure to load it correctly.
6) Because this unit can't be used on its own right, surely mount it on PC(Pentium or more) and check operating condition by using a suitable device driver floppy diskette. Refer to instructions manual for more information.
7) This unit consists of many parts whose features can affect on safety and importance indications are specially given in circuit diagram and part list of crucial parts. Be certain to use the parts with same specifications when replacing these parts.
8) Be careful not to cause damage to CLAMPER of MECHA. If the horizontal level of clamper is not even, that may cause low performance or malfunction.

2. Earthing when handling Pick-up

- Because the laser diode in optical Pick-up Ass'y is subject to get out of order due to potential difference generated by static electricity charged in clothes or bodies, observe the following earthing items before servicing.

1) Earthing the static electricity in the body
   Be sure to wear a grounding strap with one side earthed around your wrist.
   This earth ring removes the static electricity in your body.
2) Earthing the Work Table
   Place the earthed conductive plate (Impedance: below 104) such as copper plate on the work table.
3) Cautions for clothes
   Do not have any clothes touch with Pick-up because the static electricity in clothes can remain even after grounding.

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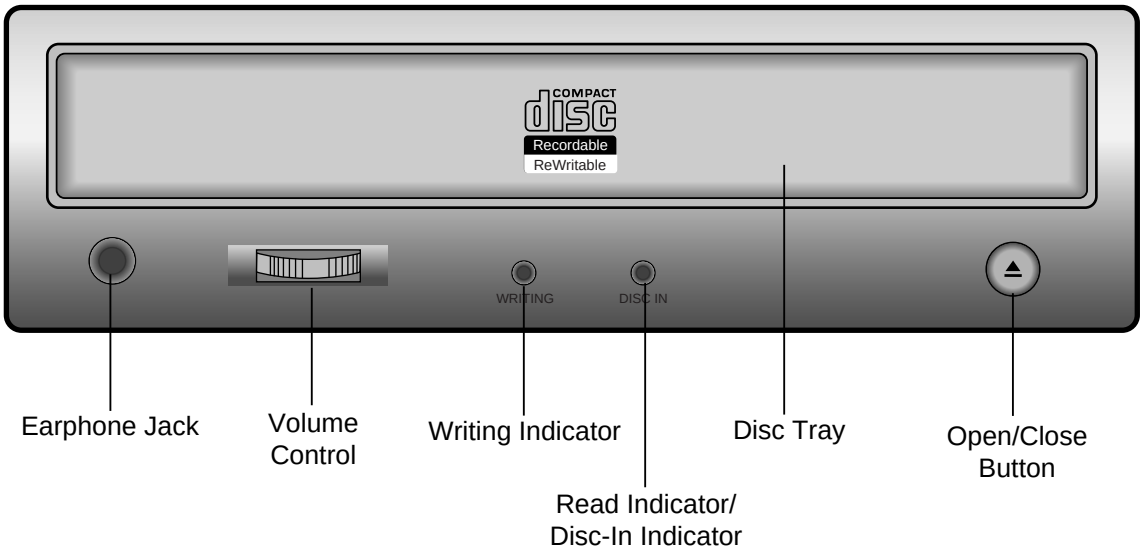
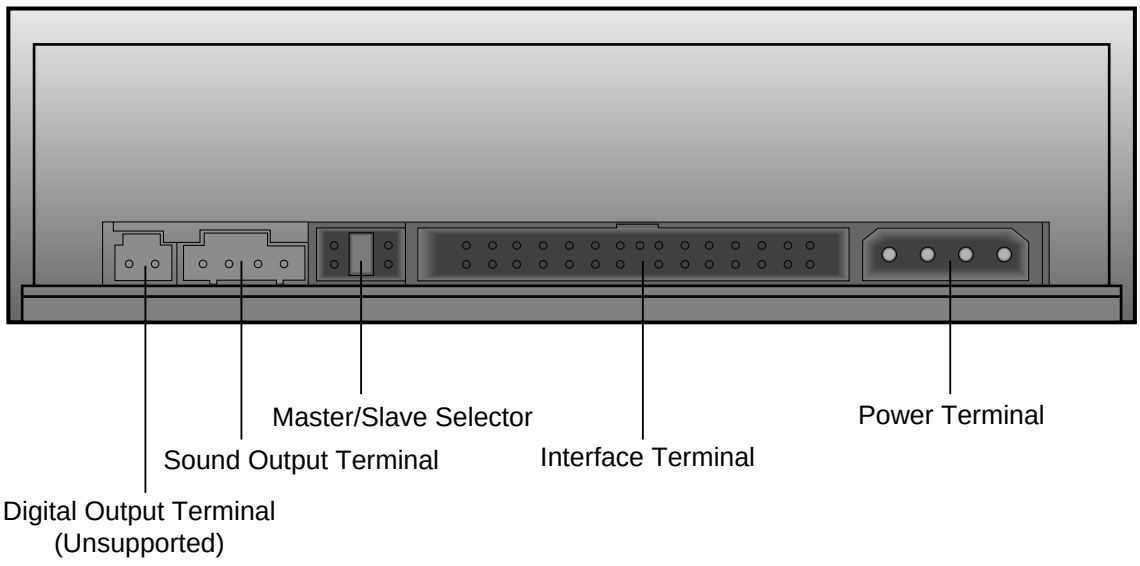
■ External Part Name

1. Front



2. Rear



■ Disassembly Procedure

1. Disassembly of Frame-Bottom Ass'y

Remove four screws (7) and two screws (8) securing the Frame-Bottom Ass'y (6) and take it out by lifting upward. Refer to the exploded view in the next page.

2. Disassembly of Main PCB

Remove two 22P wires, 11P wire and two screws (8). Then lift PCB upward and remove two 2P connectors to take out the Main PCB.

3. Disassembly of Cover Top and Deck

Remove four screws (7) and disassemble the Deck.